

**Environmental Protection Agency**
**Pt. 63, Subpt. G, Table 32**

Fitting type and construction details	Loss factors <sup>b</sup>			Typical number of fittings, $N_T$
	$K_{Fa}$ (lb-mole/ yr)	$K_{Fb}$ (lb-mole/ [mi/hr] <sup>m</sup> -yr)	$m$ (dimensionless)	
Rim vent (6-in-diameter) .....	.....	.....	.....	1 <sup>g</sup> .
Weighted mechanical actuation, gasketed.	0.71	0.10	<sup>c</sup> 1.0	
Weighted mechanical actuation, ungasketed.	0.68	1.8	1.0	

<sup>a</sup>The roof fitting loss factors,  $K_{Fa}$ ,  $K_{Fb}$ , and  $m$ , may only be used for wind speeds from 2 to 15 miles per hour.

<sup>b</sup>Unit abbreviations are as follows: lb = pound; mi = miles; hr = hour; yr = year.

<sup>c</sup>If no specific information is available, this value can be assumed to represent the most common or typical roof fittings currently in use.

<sup>d</sup>A slotted guide-pole/sample well is an optional fitting and is not typically used.

<sup>e</sup>Roof drains that drain excess rainwater into the product are not used on pontoon floating roofs. They are, however, used on double-deck floating roofs and are typically left open.

<sup>f</sup>The most common roof leg diameter is 3 inches. The loss factors for 2½-inch diameter roof legs are provided for use if this smaller size roof is used on a particular floating roof.

<sup>g</sup>Rim vents are used only with mechanical-shoe primary seals.

**TABLE 31 TO SUBPART G OF PART 63—TYPICAL NUMBER OF VACUUM BREAKERS,  $N_{F6}$   
AND ROOF DRAINS, <sup>a</sup>  $N_{F7}$**

Tank diameter D (feet) <sup>b</sup>	No. of vacuum breakers, $N_{F6}$		No. of roof drains, $N_{F7}$ double-deck roof <sup>c</sup>
	Pontoon roof	Double-deck roof	
50 .....	1	1	1
100 .....	1	1	1
150 .....	2	2	2
200 .....	3	2	3
250 .....	4	3	5
300 .....	5	3	7
350 .....	6	4	<sup>d</sup>
400 .....	7	4	<sup>d</sup>

<sup>a</sup>This table should not supersede information based on actual tank data.

<sup>b</sup>If the actual diameter is between the diameters listed, the closest diameter listed should be used. If the actual diameter is midway between the diameters listed, the next larger diameter should be used.

<sup>c</sup>Roof drains that drain excess rainwater into the product are not used on pontoon floating roofs. They are, however, used on double-deck floating roofs, and are typically left open.

<sup>d</sup>For tanks more than 300 feet in diameter, actual tank data or the manufacturer's recommendations may be needed for the number of roof drains.

**TABLE 32 TO SUBPART G OF PART 63—TYPICAL NUMBER OF ROOF LEGS, <sup>a</sup>  $N_{F8}$**

Tank diameter D (feet) <sup>b</sup>	Pontoon roof		No. of legs on double-deck roof
	No. of pontoon legs	No. of center legs	
30 .....	4	2	6
40 .....	4	4	7
50 .....	6	6	8
60 .....	9	7	10
70 .....	13	9	13
80 .....	15	10	16
90 .....	16	12	20
100 .....	17	16	25
110 .....	18	20	29
120 .....	19	24	34
130 .....	20	28	40
140 .....	21	33	46
150 .....	23	38	52
160 .....	26	42	58
170 .....	27	49	66
180 .....	28	56	74
190 .....	29	62	82
200 .....	30	69	90
210 .....	31	77	98
220 .....	32	83	107
230 .....	33	92	115
240 .....	34	101	127
250 .....	34	109	138
260 .....	36	118	149
270 .....	36	128	162
280 .....	37	138	173

Pt. 63, Subpt. G, Table 33

40 CFR Ch. I (7-1-12 Edition)

Tank diameter D (feet) <sup>b</sup>	Pontoon roof		No. of legs on double-deck roof
	No. of pontoon legs	No. of center legs	
290 .....	38	148	186
300 .....	38	156	200
310 .....	39	168	213
320 .....	39	179	226
330 .....	40	190	240
340 .....	41	202	255
350 .....	42	213	270
360 .....	44	226	285
370 .....	45	238	300
380 .....	46	252	315
390 .....	47	266	330
400 .....	48	281	345

<sup>a</sup>This table should not supersede information based on actual tank data.

<sup>b</sup>If the actual diameter is between the diameters listed, the closest diameter listed should be used. If the actual diameter is midway between the diameters listed, the next larger diameter should be used.

TABLE 33 TO SUBPART G OF PART 63—SATURATION FACTORS

Cargo carrier	Mode of operation	S factor
Tank trucks and rail tank cars .....	Submerged loading of a clean cargo tank .....	0.50
	Submerged loading: dedicated normal service .....	0.60
	Submerged loading: dedicated vapor balance service .....	1.00
	Splash loading of a clean cargo tank .....	1.45
	Splash loading: dedicated normal service .....	1.45
	Splash loading: dedicated vapor balance service .....	1.00

TABLE 34 TO SUBPART G OF PART 63—FRACTION MEASURED ( $F_m$ ) AND FRACTION EMITTED ( $F_e$ ) FOR HAP COMPOUNDS IN WASTEWATER STREAMS

Chemical name	CAS Number <sup>a</sup>	$F_m$	$F_e$
Acetaldehyde .....	75070	1.00	0.48
Acetonitrile .....	75058	0.99	0.36
Acetophenone .....	98862	0.31	0.14
Acrolein .....	107028	1.00	0.43
Acrylonitrile .....	107131	1.00	0.43
Allyl chloride .....	107051	1.00	0.89
Benzene .....	71432	1.00	0.80
Benzyl chloride .....	100447	1.00	0.47
Biphenyl .....	92524	0.86	0.45
Bromoform .....	75252	1.00	0.49
Butadiene (1,3-) .....	106990	1.00	0.98
Carbon disulfide .....	75150	1.00	0.92
Carbon tetrachloride .....	56235	1.00	0.94
Chlorobenzene .....	108907	1.00	0.73
Chloroform .....	67663	1.00	0.78
Chloroprene (2-Chloro-1,3-butadiene) .....	126998	1.00	0.68
Cumene .....	98828	1.00	0.88
Dichlorobenzene (p-) .....	106467	1.00	0.72
Dichloroethane (1,2-) (Ethylene dichloride) .....	107062	1.00	0.64
Dichloroethyl ether (Bis(2-Chloroethyl ether)) .....	111444	0.76	0.21
Dichloropropene (1,3-) .....	542756	1.00	0.76
Diethyl sulfate .....	64675	0.0025	0.11
Dimethyl sulfate .....	77781	0.086	0.079
Dimethylaniline (N,N-) .....	121697	0.00080	0.34
Dimethylhydrazine (1,1-) .....	57147	0.38	0.054
Dinitrophenol (2,4-) .....	51285	0.0077	0.060
Dinitrotoluene (2,4-) .....	121142	0.085	0.18
Dioxane (1,4-) (1,4-Diethyleneoxide) .....	123911	0.87	0.18
Epichlorohydrin(1-Chloro-2,3-epoxypropane) .....	106898	0.94	0.35
Ethyl acrylate .....	140885	1.00	0.48
Ethylbenzene .....	100414	1.00	0.83
Ethyl chloride (Chloroethane) .....	75003	1.00	0.90
Ethylene dibromide (Dibromomethane) .....	106934	1.00	0.57
Ethylene glycol dimethyl ether .....	110714	0.86	0.32
Ethylene glycol monobutyl ether acetate .....	112072	0.043	0.067
Ethylene glycol monomethyl ether acetate .....	110496	0.093	0.048